



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

## NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY, FLORIDA  
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**Tischler und Sohn (USA) Ltd.**

**Six Suburban Avenue**

**Stamford, CT 06901**

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/ or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

**DESCRIPTION: Series "Concealed Balance System" Single & Double Hung Wood Window – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. 1827, Series titled "Single & Double Concealed Balance System Hung Impact Window", sheets 01 through 07 of 07, dated 07/02/12 with the latest revision dated 05/28/13, prepared by W. W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E., bearing the Miami-Dade County Product Control Section Approval stamp with the Notice of Acceptance number and Approval date by the Miami-Dade County Product Control Section.

**MISSILE IMPACT RATING: Large and Small Missile Impact Resistant**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/ series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Jaime D. Gascon, P. E.**



*J. Gascon*  
*6/4/13*

NOA No. 13-0304.07

Expiration Date: June 13, 2018

Approval Date: June 13, 2013

Page 1

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No. **1827**, Series titled "Single & Double Concealed Balance System Hung Impact Window", sheets 01 through 07 of 07, dated 07/02/12 with the latest revision dated 05/28/13, prepared by W. W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E.

**B. TESTS**

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94  
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94  
3) Water Resistance Test, per FBC, TAS 202-94  
4) Large Missile Impact Test per FBC, TAS 201-94  
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94  
along with marked-up drawings and installation diagram of a wood hung window, prepared by Architectural Testing, Inc., Test Report No. **ATI-C262.01-109-18**, dated 11/20/12, signed and sealed by Michael D. Stremmel, P. E.

**C. CALCULATIONS**

1. Anchor calculations and structural analysis, complying with **FBC-2010**, dated 09/25/12, prepared by W. W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E.
2. Glazing complies with **ASTM E1300-04**

**D. QUALITY ASSURANCE**

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

**E. MATERIAL CERTIFICATIONS**


1. Notice of Acceptance No. **12-1231.08** issued to **Eastman Chemical Company (MA)** for their "**Saflex CP – Saflex and Saflex HP Composite Glass Interlayers with PET Core**" dated 03/28/13, expiring on 12/11/18.

**F. STATEMENTS**

1. Statement letter of conformance with ANSI/ AAMA/ NWWDA 101/ I.S.2-97 and complying with **FBC-2010**, dated 10/09/12, issued by W. W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E.
2. Statement letter of no financial interest and independence, dated 09/25/12, issued by W. W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E.
3. Laboratory compliance letter for Test Report No. **ATI-C262.01-109-18**, issued by Architectural Testing, Inc., dated 11/20/12, signed and sealed by Michael Stremmel, P.E.

**G. OTHERS**

1. None.



Jaime D. Gascon, P. E.  
Product Control Section Supervisor  
NOA No. 13-0304.07  
Expiration Date: June 13, 2018  
Approval Date: June 13, 2013

# GENERAL NOTES:

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE WINDOWS.
7. ALL ANCHORS SECURING WINDOW FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
11. ALL WOOD MEMBERS OF WINDOWS THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC SECTION 2326.

## SASH LOCK QUANTITY REQUIREMENTS

FRAME WIDTH	QUANTITY PER SASH
22"	2
22" & LESS	1

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY: W.R.M.  
CHECKED BY: W.W.S.  
PLOT: 1=24  
DATE: 07/02/12

## FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP/BACKET TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS/WOOD SCREW OR 1/4" BTI SCREW	1 1/4"	3/4"
MIN. 16 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
(3) C-90 CMU	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 3/4"	2"

## INSTALLATION CLIP SCREWS

(2) MIN. 2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 12 SMS OR WOOD SCREW	1 3/8"	3/4"
MIN. 16 GA. 33 KSI METAL STUD	NO. 12 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 12 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 12 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
(3) C-90 CMU	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 3/4"	2"

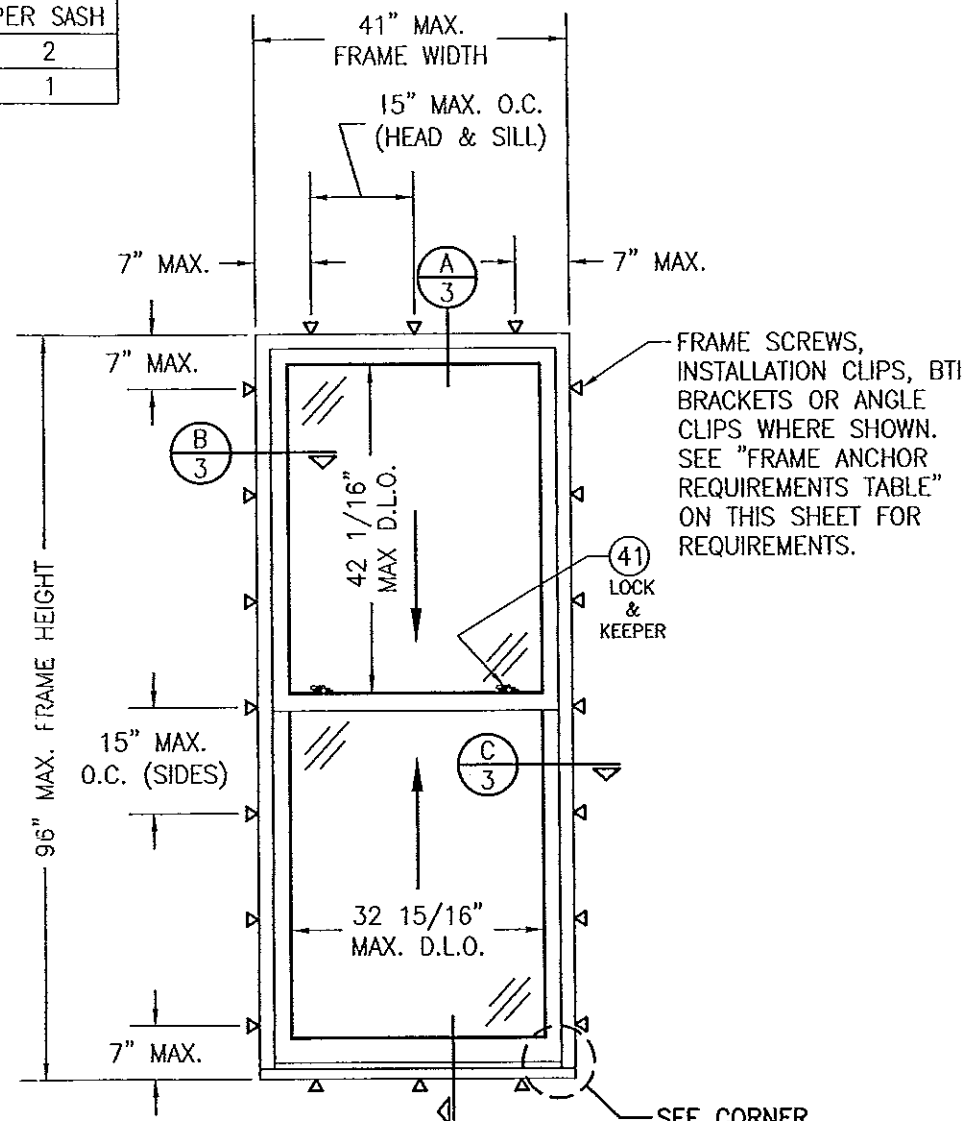
## BTI BRACKET SCREWS

(2) MIN. 2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS OR WOOD SCREW	1 3/8"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"

## ANGLE CLIP SCREWS

MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS OR WOOD SCREW	1 5/16"	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S. OR S.S.).
- (2) 2X\_ BUCKS SHALL BE OF A MINIMUM DEPTH REQUIRED TO MEET ANCHOR EDGE DISTANCE REQUIREMENTS
- (3) CMU IS NOT APPLICABLE AT HEAD OR SILL.



## EXTERIOR ELEVATION: SINGLE WINDOW

SCALE: 1/2" = 1'-0"

(DOUBLE HUNG WINDOW SHOWN. SINGLE HUNG IS IDENTICAL EXCEPT THE TOP SASH IS FIXED. FOR SINGLE HUNG FIXED SASH DETAIL, SEE "ALTERNATE SECTION B" ON SHEET 3)

## ALLOWABLE DESIGN PRESSURE (ALL WINDOW CONDITIONS)

+/-70 PSF

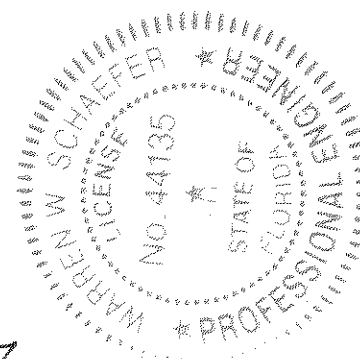
## CORNER CONSTRUCTION:

FRAME CORNERS: SQUARE CUT, BUTTED AND JOINED WITH THREE(3) NO. 10 X 2" WOOD SCREWS THROUGH THE HORIZONTAL MEMBERS INTO THE VERTICAL MEMBERS & GLUED WITH OTTOSEAL M360 WOOD GLUE OR EQUIVALENT.  
MULLION ENDS: SQUARE CUT, BUTTED AND JOINED WITH TWO(2) NO. 10 X 2" WOOD SCREWS THROUGH THE HORIZONTAL MEMBERS INTO THE VERTICAL MEMBERS & GLUED WITH OTTOSEAL M360 WOOD GLUE OR EQUIVALENT.  
SASH CORNERS: SQUARE CUT, BUTTED AND JOINED WITH FOUR(4) 5/16" X 1 1/2" WOOD DOWELS & GLUED WITH POXAL SUPER 3 WOOD GLUE OR EQUIVALENT.

Approved as complying with the Florida Building Code

Date: 06/13/2013  
NOA# 13-0304.07  
Miami Dade Product Control

By: [Signature]



DRAWING TITLE: SINGLE & DOUBLE HUNG CONCEALED BALANCE SYSTEM IMPACT WINDOW

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)

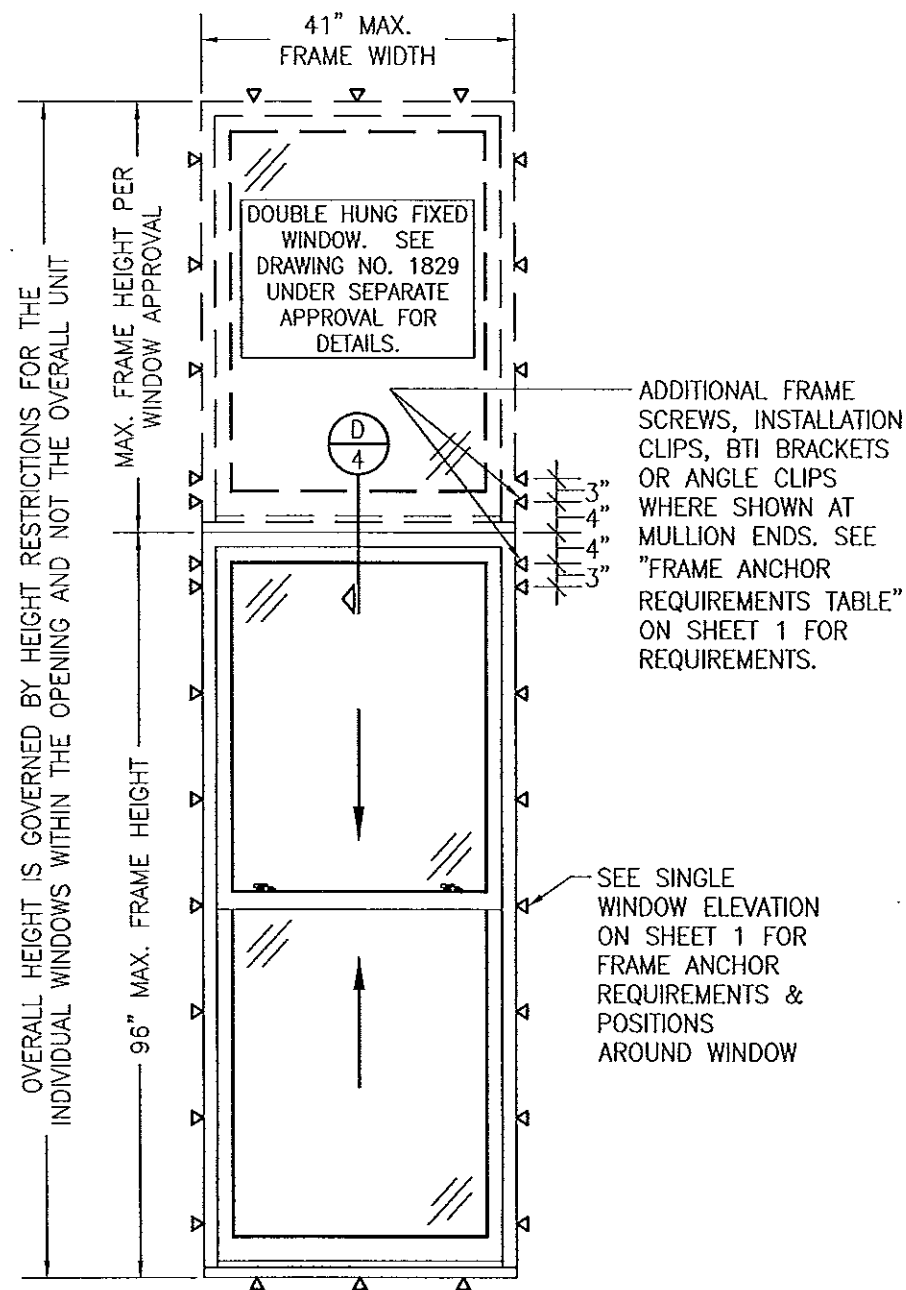
MANUFACTURER: TISCHLER UND SOHN (USA) LTD.  
SIX SUBURBAN AVENUE  
STAMFORD, CONNECTICUT 06307-674-0600

CERTIFICATION: MAY 28 2013

WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO. 1827

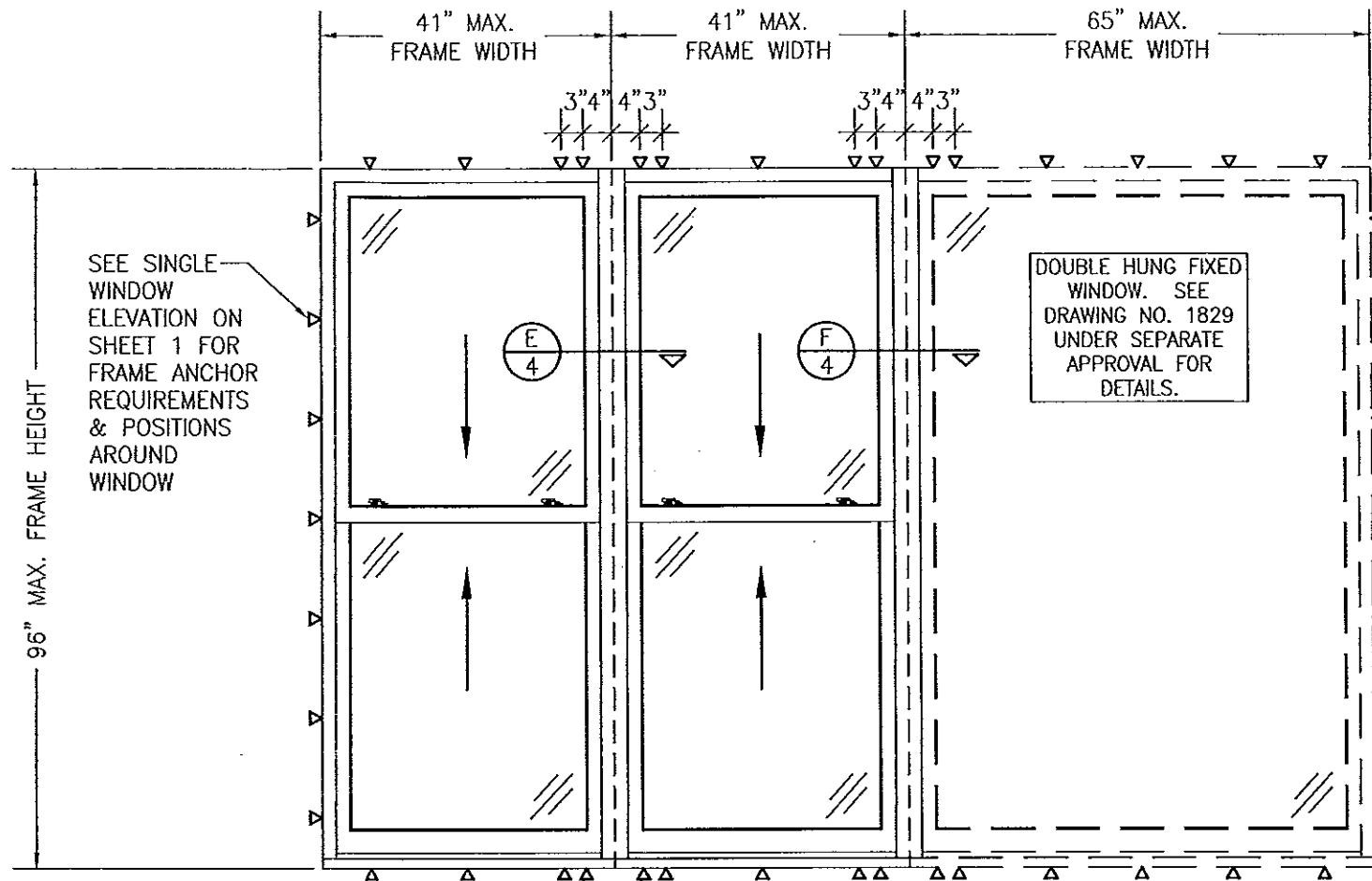
SHEET NO. 1 OF 7



**EXTERIOR ELEVATION:  
SINGLE WINDOW WITH TRANSOM**

SCALE: 1/2" = 1'-0"

(DOUBLE HUNG WINDOW SHOWN. SINGLE HUNG WINDOW ALSO APPLIES)  
(FOR DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATION ON SHEET 1)



**EXTERIOR ELEVATION:  
MULTIPLE OPERABLE/FIXED WINDOW**

SCALE: 1/2" = 1'-0"

(DOUBLE HUNG WINDOWS SHOWN. SINGLE HUNG WINDOWS ALSO APPLY)

**MULTIPLE UNIT NOTES:**

1. FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL WINDOW ELEVATION.
2. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED HORIZONTALLY IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE WINDOWS & THEIR MULLIONS.
3. ANY COMBINATION OF FIXED/OPERABLE WINDOWS IN ONE OPENING SHALL APPLY.

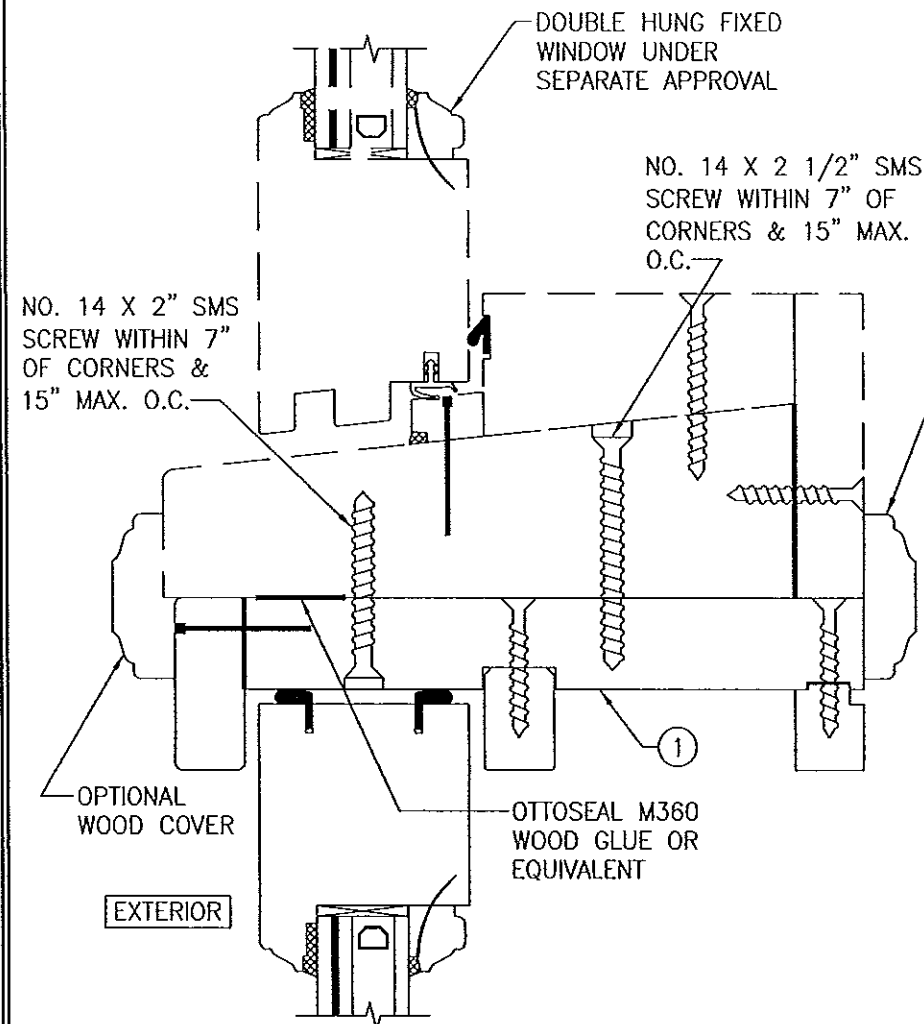
Approved as complying with the  
Florida Building Code  
Date 06/13/2013  
NOAH 13-0304.07  
Miami Dade Product Control

By [Signature]

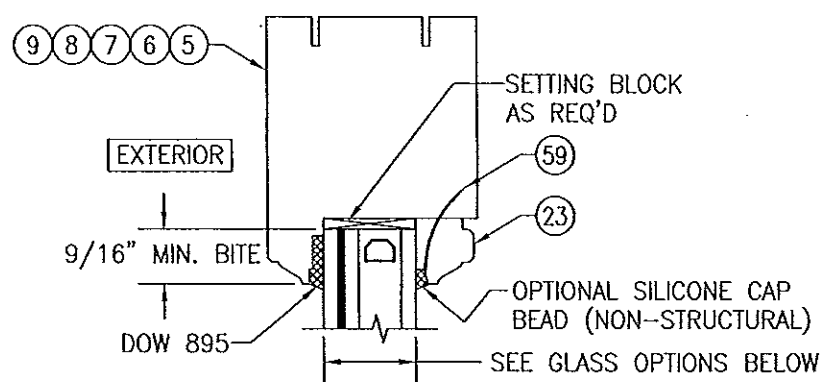


DRAWN BY: W.R.U.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 07/02/12	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: SINGLE & DOUBLE HUNG CONCEALED BALANCE SYSTEM IMPACT WINDOW			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CERTIFICATION MAY 28 2013		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1827		REV.	
SHEET NO. 2 OF 7			



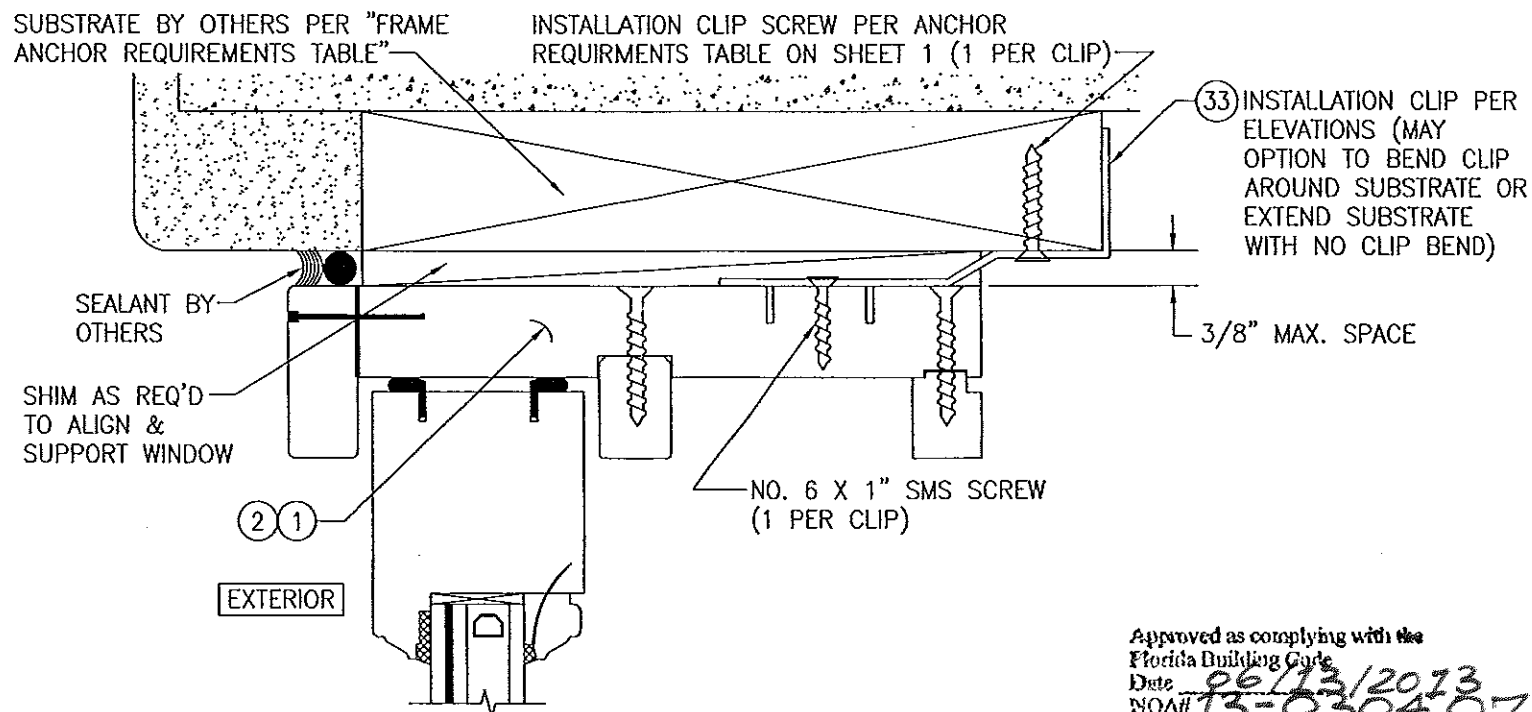
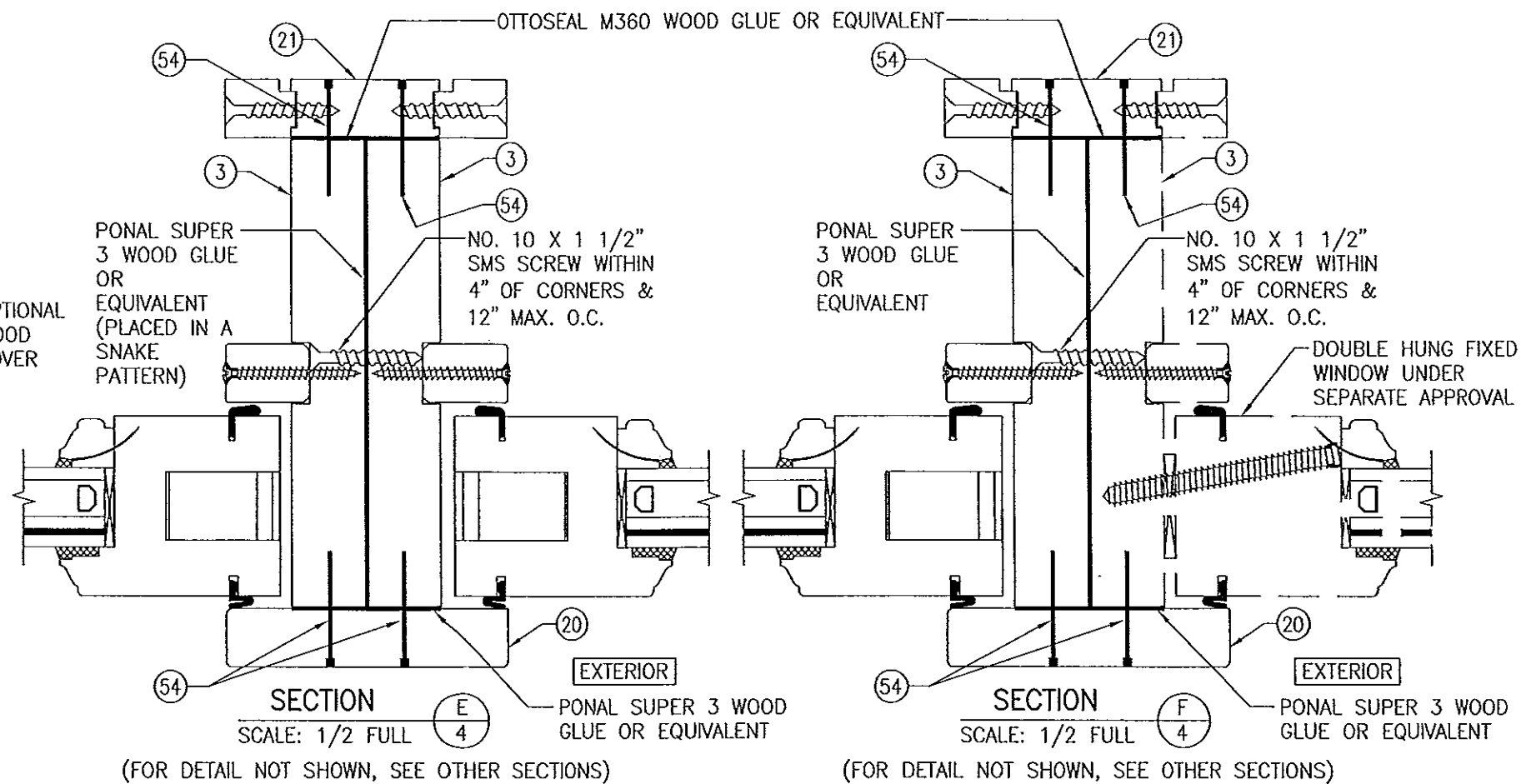


SECTION D  
SCALE: 1/2 FULL  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



### TYPICAL GLAZING DETAIL

GLASS OPTION 1: 1 1/8" LAMINATED I.G. (3/16" AN./0.075" EASTMAN CHEM. CO. SAFLEX CP/3/16" AN. EXTERIOR; 1/2" AIR SPACE/3/16" AN. INTERIOR)  
 GLASS OPTION 2: 1 1/8" LAMINATED I.G. (3/16" AN./0.075" EASTMAN CHEM. CO. SAFLEX CP/3/16" AN. EXTERIOR; 1/2" AIR SPACE/3/16" TEMP. INTERIOR)  
 GLASS OPTION 3: 1 1/8" LAMINATED I.G. (3/16" HT. ST./0.075" EASTMAN CHEM. CO. SAFLEX CP/3/16" HT. ST. EXTERIOR; 1/2" AIR SPACE/3/16" TEMP. INTERIOR)



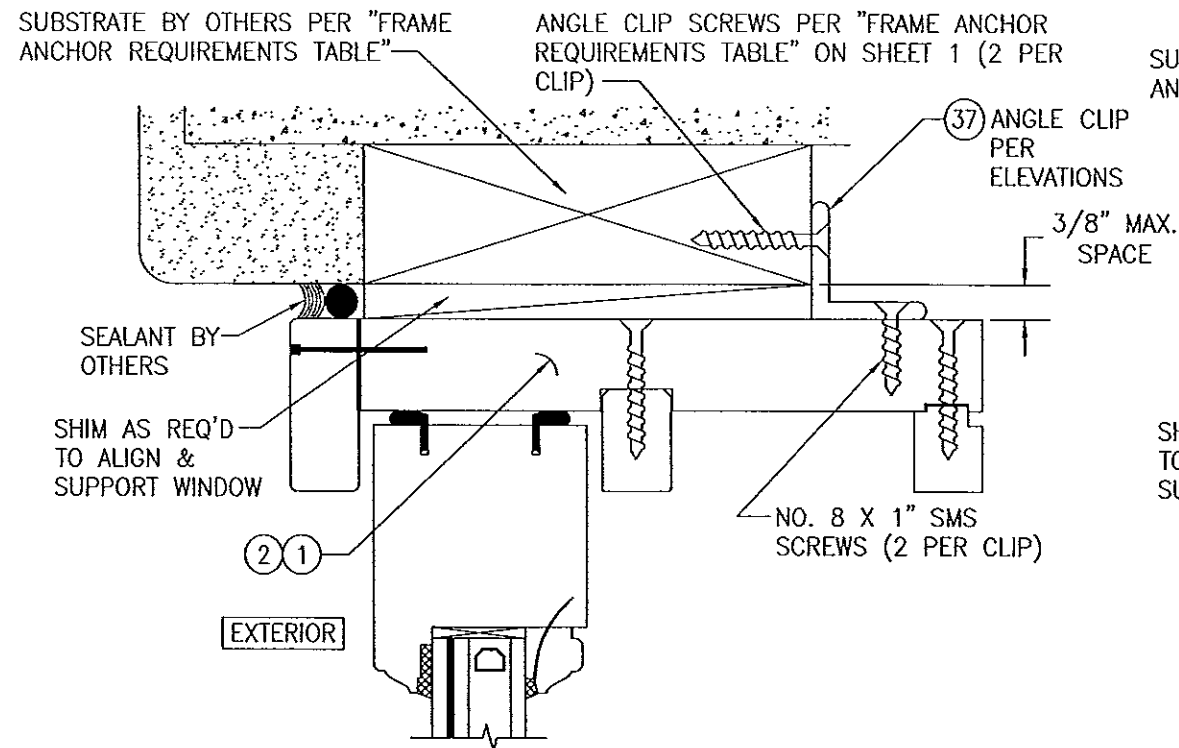
### OPTIONAL INSTALLATION CLIP DETAIL

(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

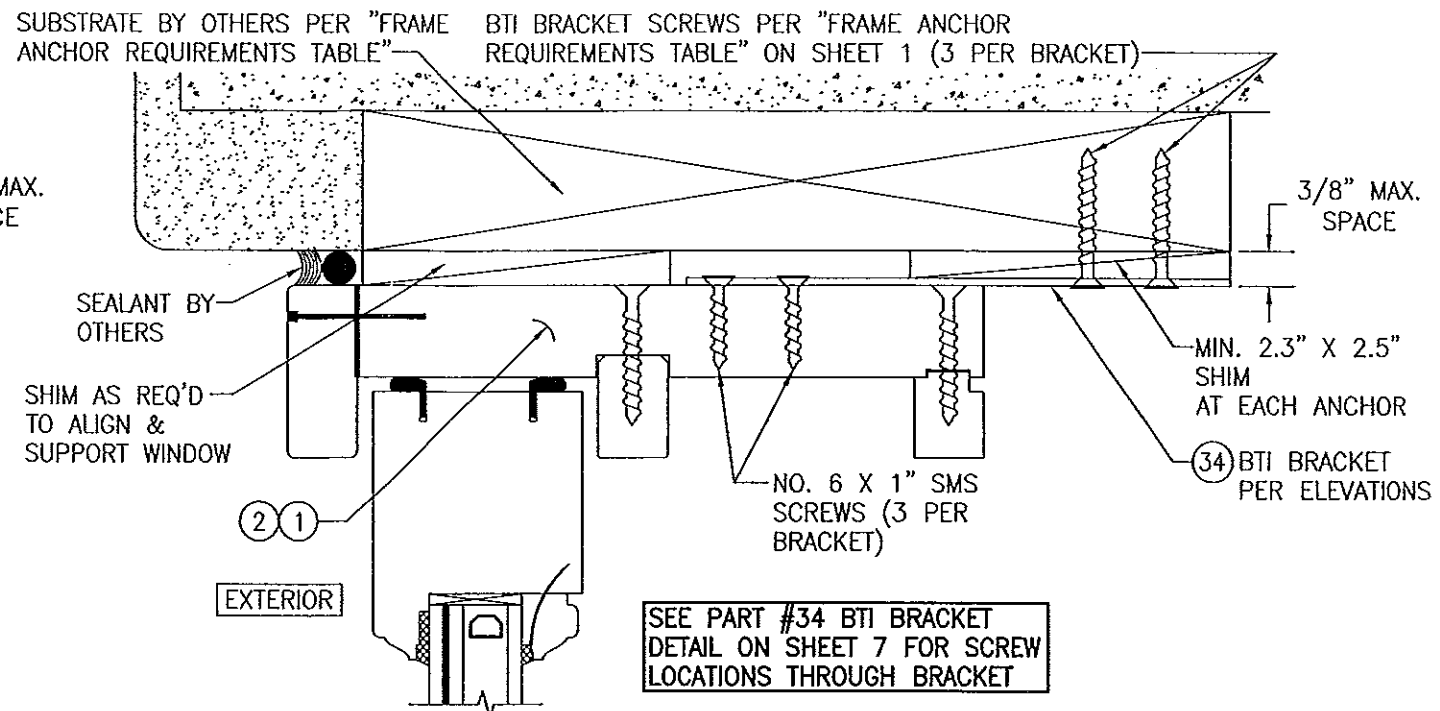
Approved as complying with the  
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 Date 06/13/2013  
 NOAH 13-0304-07  
 Miami Dade Product Control



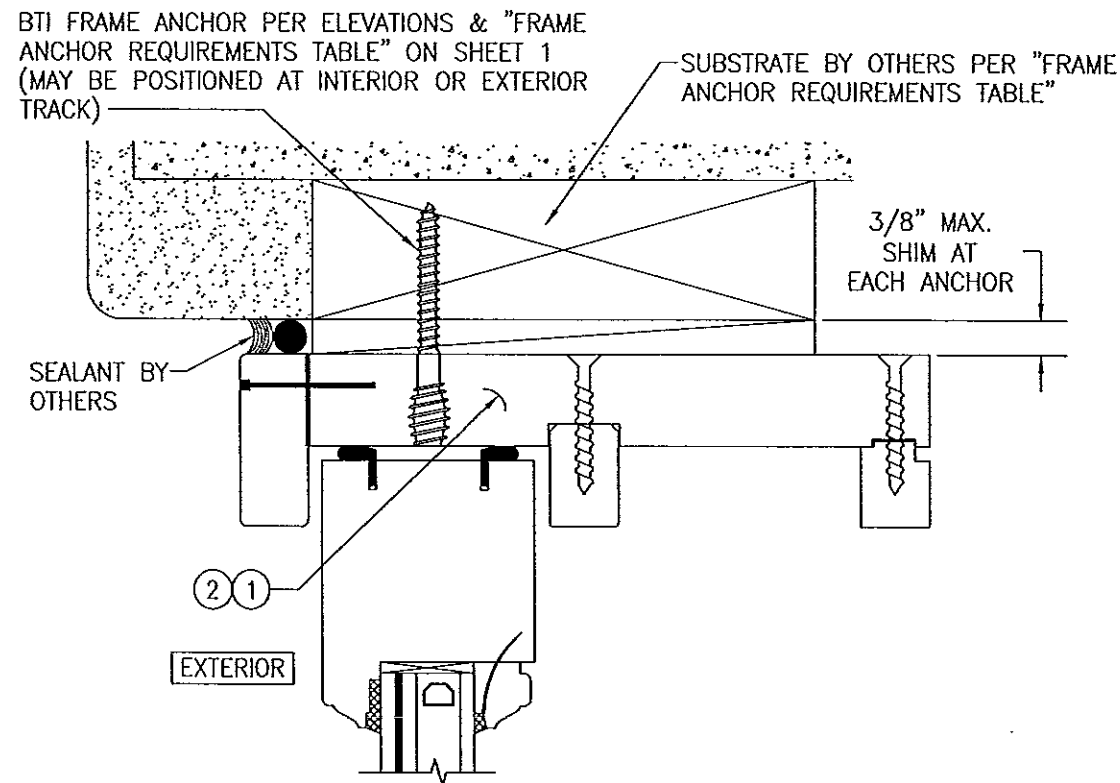
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 07/02/12
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE SINGLE & DOUBLE HUNG CONCEALED BALANCE SYSTEM IMPACT WINDOW	
MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	WARREN W. SCHAEFER, P.E. NO. 44135
MAY 28 2013	
DRAWING NO. 1827	REV.
SHEET NO. 4	OF 7



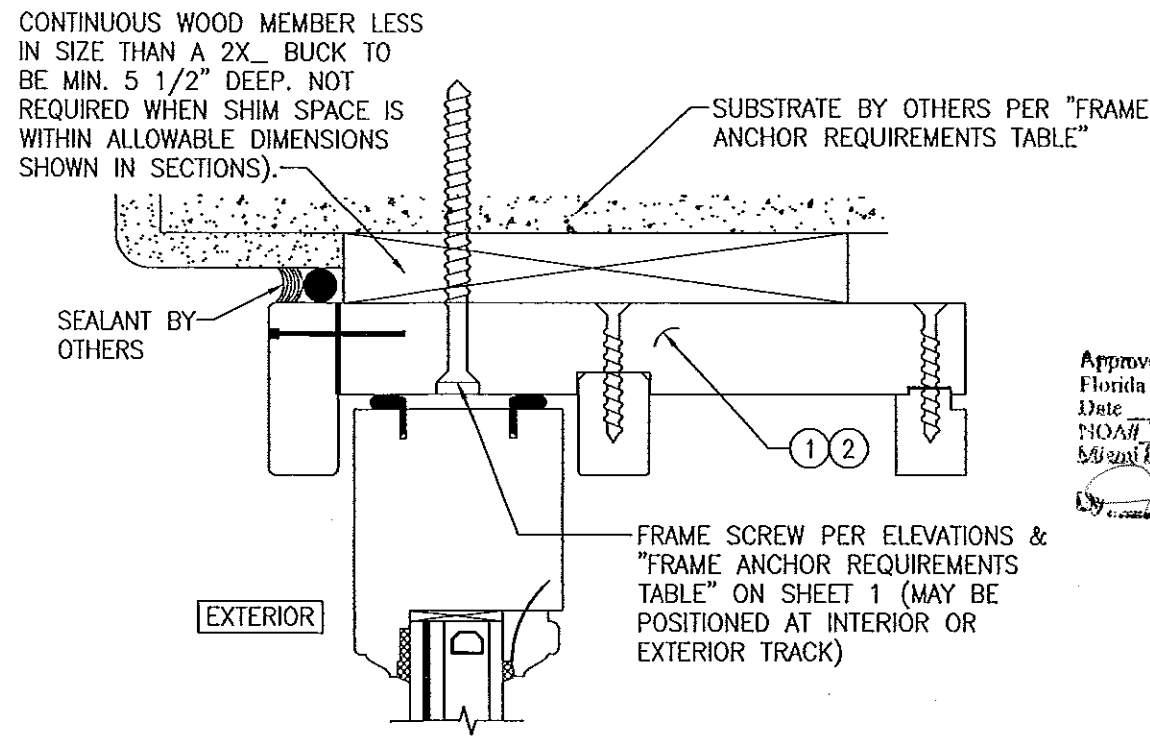
**OPTIONAL ANGLE CLIP INSTALLATION DETAIL**  
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



**OPTIONAL BTI BRACKET INSTALLATION DETAIL**  
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

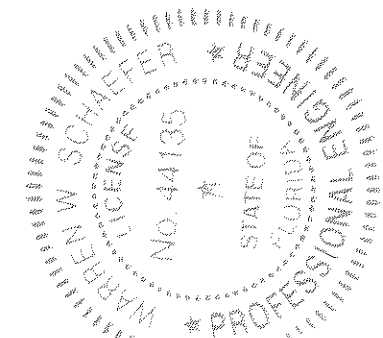


**OPTIONAL BTI SCREW DETAIL**  
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

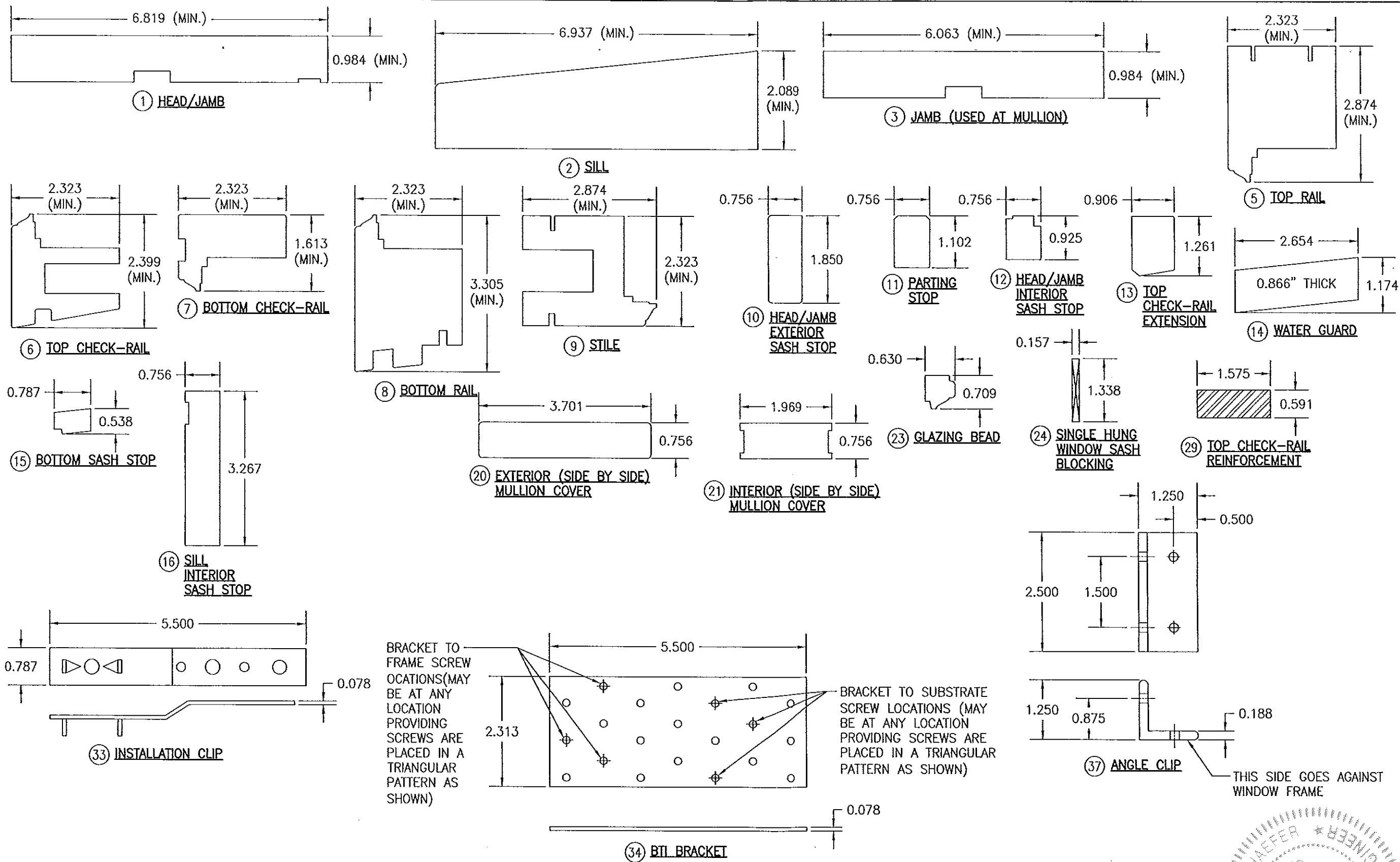


**OPTIONAL DIRECT MOUNT DETAIL  
TO SUBSTRATE WITH SPACER**  
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

Approved as complying with the  
Florida Building Code  
Date 05/13/2013  
NOAH 13-8304.07  
Miami Code Product Control  
*[Signature]*



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 07/02/12
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE SINGLE & DOUBLE HUNG CONCEALED BALANCE SYSTEM IMPACT WINDOW	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CERTIFICATION MAY 28 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING NO. 1827 SHEET NO. 5 OF 7



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 07/02/12
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE: SINGLE & DOUBLE HUNG CONCEALED BALANCE SYSTEM IMPACT WINDOW	
MANUFACTURER: TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	MAY 28 2013
DRAWING NO.	1827
SHEET NO.	6 OF 7

Approved as complying with the  
Florida Building Code  
Date 06/13/2013  
NOAH 13-0304.07  
Miami Dade Product Control  
By [Signature]

